UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

August 1963

Part II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

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* Part I - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, Post Office Building, San Pedro, California

1963 BLUEFIN TUNA TAGGING CRUISE COMPLETED

The M/V Elsinore, operating under charter to the U.S. Bureau of Commercial Fisheries, and in cooperation with the California Department of Fish and Game, recently completed the second of a series of annual tagging cruises designed to provide sorely needed information on the age, growth, movements, and vital statistics of the Pacific bluefin tuna, Thunnus thynnus. In continuation of the pilot program carried out aboard the M/V West Point last year, the current operation has extended the area of tag releases from the southern California offshore waters to Turtle Bay, Baja California, Mexico.

Specific objectives of the cruise included the tagging and release of bluefin tuna, collection of serological materials for subpopulation analysis, length-frequency samples of the individual catches, collection of bathythermograph data relating catch success to thermocline depth and magnitude, and collateral oceanographic and meteorological observations.

Five hundred and forty-three bluefin were tagged and released between July 19 and August 19, 1963. Release data and locations are listed in Table 1.

Table 1.--Bluefin Tuna Tag Release Data, M/V Elsinore, July 19-Aug.19,1963

Date	Position		Number Released
	Latitude	Longitude	
July 19	27° 10' N.	115° 10' W.	76
July 26	27° 14' N.	115° 32' W.	112
August 10	30° 43' N.	117° 43' W.	55
August 10	30° 27' N.	117° 47' W.	77
August 11	31° 03' N.	117° 35' W.	122
August 12	32° 10' N.	117° 52' W.	37
August 19	32° 48' N.	118° 03' W.	64
Total			543

Tags used are of standard yellow plastic dart-type design, identical to those used by the Inter-American Tropical Tuna Commission for marking of yellowfin and skipjack, and are attached to the right side of the fish below and aft of the second dorsal fin. The tags are marked "Return to California Department of Fish and Game". If you should catch a tagged bluefin, please preserve the specimen. Upon your return to port, contact waterfront representatives of the Inter-American Tropical Tuna Commission,

California Department of Fish and Game, or the Bureau of Commercial Fisheries. Any one of these representatives will measure and check the condition of the fish, as well as take the tag from it. Be sure to record the date and location of capture. There is a $1.00 reward for the return of each properly documented tag.

SEA TEMPERATURE SUMMARY GOES AUTOMATIC

The sea surface temperature charts presented in this issue are the first of a new series which are derived from a completely rewritten automatic data processing system utilizing the CDC-1604 computer facility at Scripps Institution of Oceanography. About 12,000 individual marine synoptic weather observations have been summarized for the charts this month, and all have been subjected to an improved screening method for sorting and rejecting erroneous data. By-products of the program include the following: average sea temperatures (^{o}F) by 2-degree squares; average sea temperatures (^{o}C) by 5-degree squares; barometer averages (mb) by 1-degree squares; average meridional and zonal wind vectors (kts) by 1-degree squares; average wind velocity (kts) by 1-degree squares; and oceanic heat budget data (cal/sq cm/day) by 5-degree squares.

The San Diego Biological Laboratory Tuna Forecasting Staff is now preparing a special output routine for regular printout of the summarized monthly weather data. The form that the data report will take depends, in large part, upon the demand by research personnel. Interested persons may obtain further information by writing to the Laboratory Director at the address given on the cover of this publication.

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
AUGUST 1963

Acknowledgments

The following organizations and stations contributed data for the August 1963 charts:

U.S. Weather Bureau, San Diego, California
U.S. Weather Bureau Ship Visitation Office, Long Beach, California
U.S. Naval Communication Station Balboa, Fort Amador, Canal Zone
U.S. Weather Bureau Port Meteorological Office, Cristobal, Canal Zone
U.S. Coast Guard, Port Hueneme Light Station, Port Hueneme, California
U.S. Bureau of Commercial Fisheries Biological Laboratories, Honolulu, Hawaii; La Jolla, California; Seattle, Washington
U.S. Bureau of Commercial Fisheries, Exploratory Fishing and Gear Research Base, Seattle, Washington
Guadalupe Island, Coronado Island, Ensenada, Cedros Island and Almejas Bay by Pedro Mercado of the Universidad Autonoma de Baja California, Ensenada, Mexico
Hopkins Marine Station, Pacific Grove, California by J. P. Balesteri
Inter-American Geodetic Survey by Rene Cortes at Salina Cruz, Mexico; David Ortega at Manzanillo, Mexico; Romeo Valencia at Pt. San Jose, Guatemala; R. Pereira and M. Torres at Pt. Armuelles, Panama; V. E. Castillo at Tumaco, Colombia; N. Zambrano at San Cristobal, Galapagos; S. Valenzuela at La Libertad, Ecuador; T. Torres at Talara, Peru; Juan Andia at San Juan, Peru
Inter-American Tropical Tuna Commission, La Jolla and Terminal Island, California
Kelco Company, San Diego, California
Pacific Oceanographic Group, Nanaimo, British Columbia, by H. J. Hollister from observations by R.W. Collins at Quatsino Lightstation; D. B. Jones at Cape St.James Light; B. Stuart at Amphitrite Point Light; R. A. Smith at Langara Island Light
Scripps Institution of Oceanography, La Jolla, California by Margaret Robinson and Hans Klein
Ship Santa Maria

Charts

Figure 1.--Mean sea surface temperatures (° F.) derived from approximately 8000 observations. Squares show temperatures at weather-ship stations. Numerals on shore are temperatures at coastal and light stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H.O. 225. Hatched areas are colder than mean.

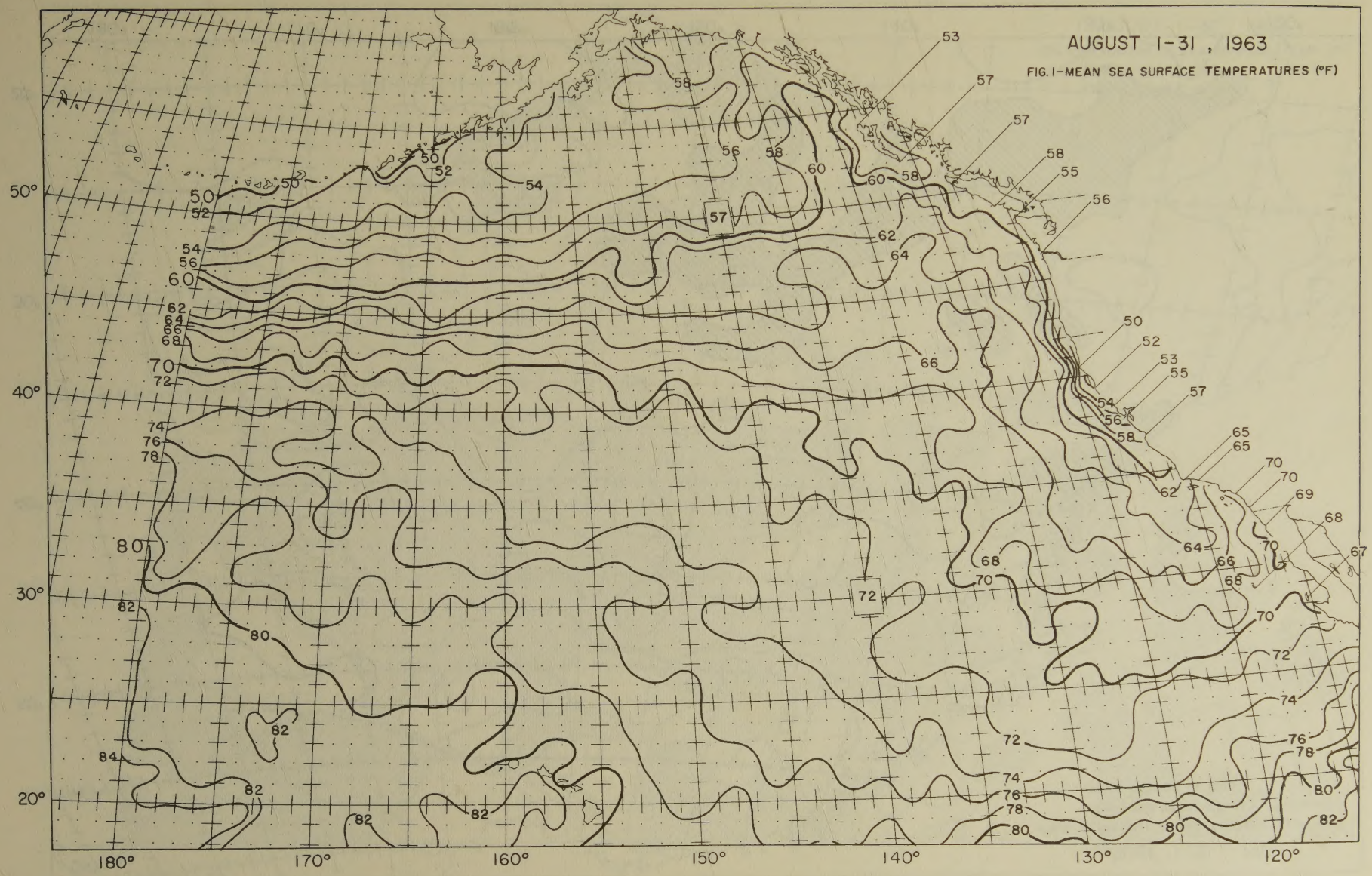
Figure 3.--Deviation of sea surface temperatures (°F) from those of August 1962. Hatched areas are colder than 1962.

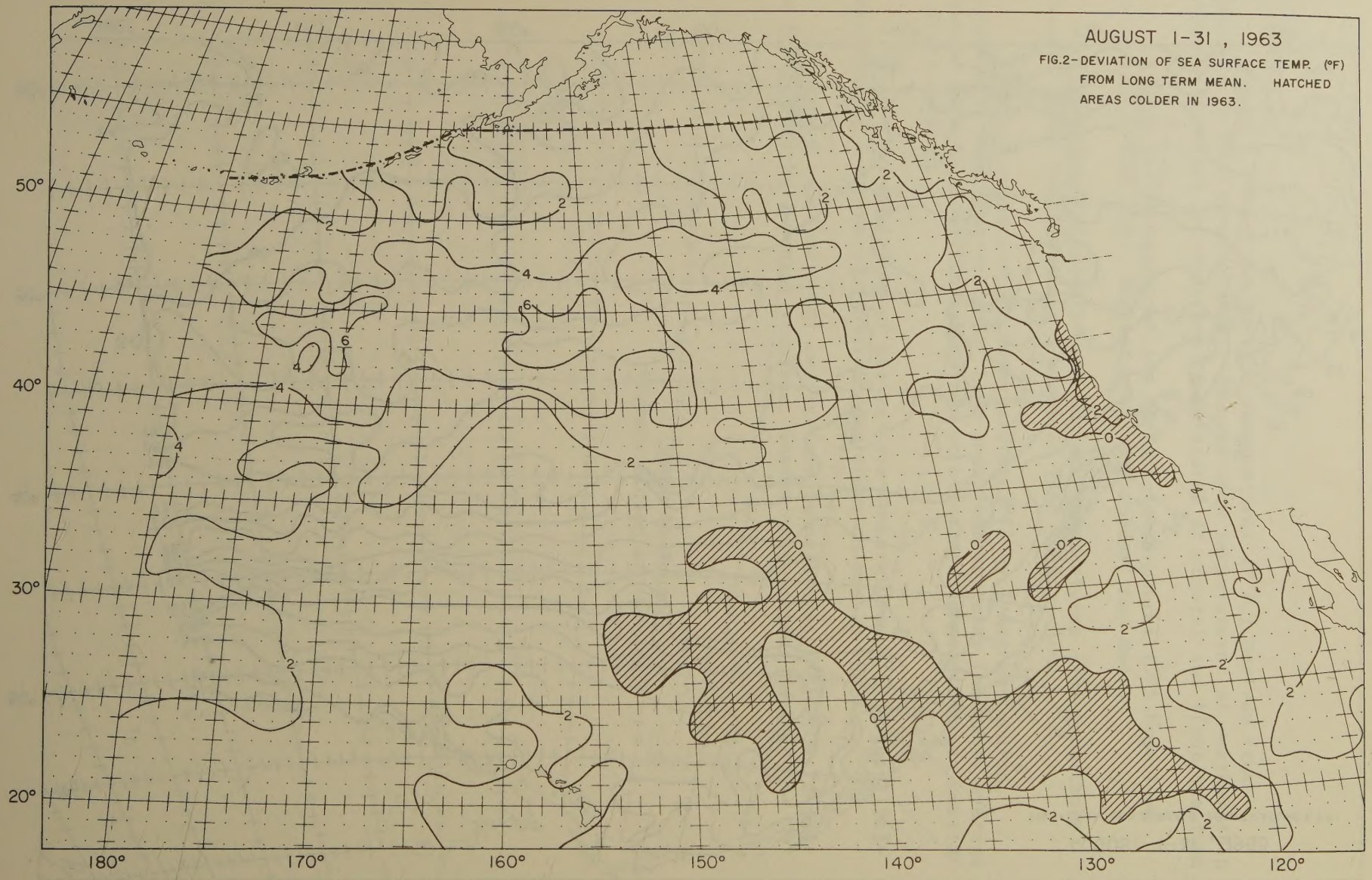
Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal and light stations.

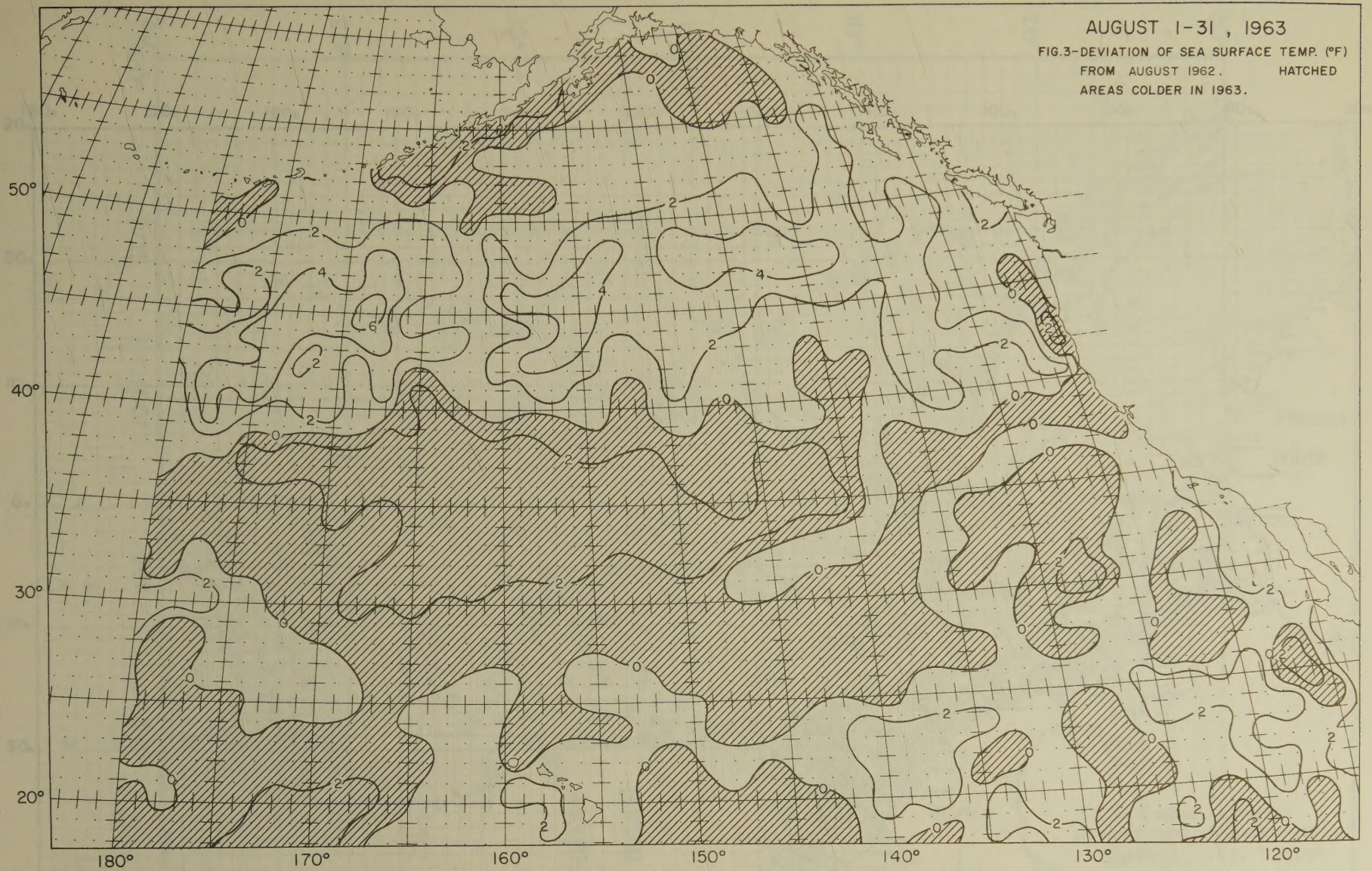
Figure 5.--Deviation of sea surface temperatures (°F) August 1963-August 1962 by 1-degree squares. Shaded areas colder in 1963.

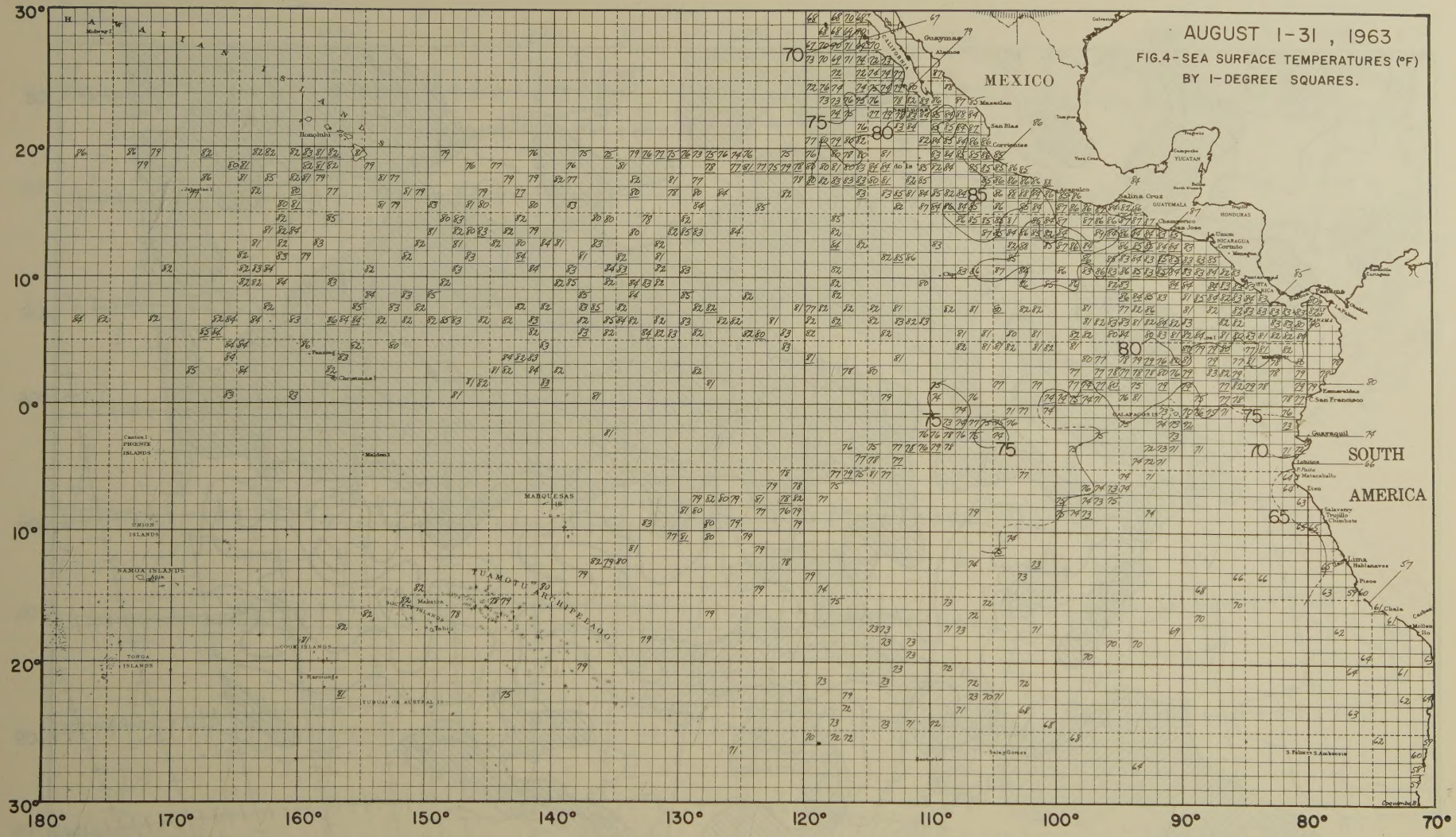
Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas colder in 1963.

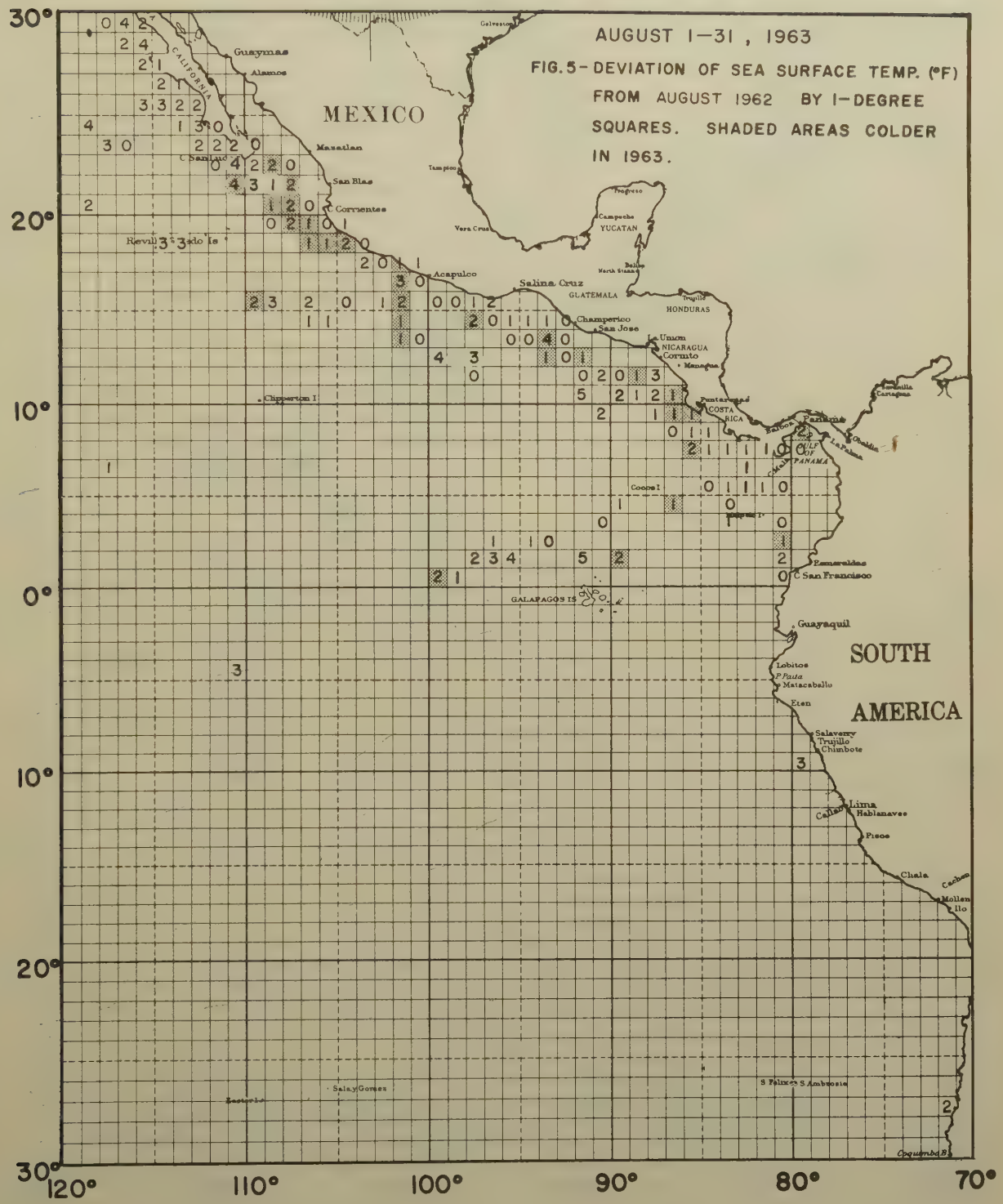
James A. Renner
Fishery Biologist (General)

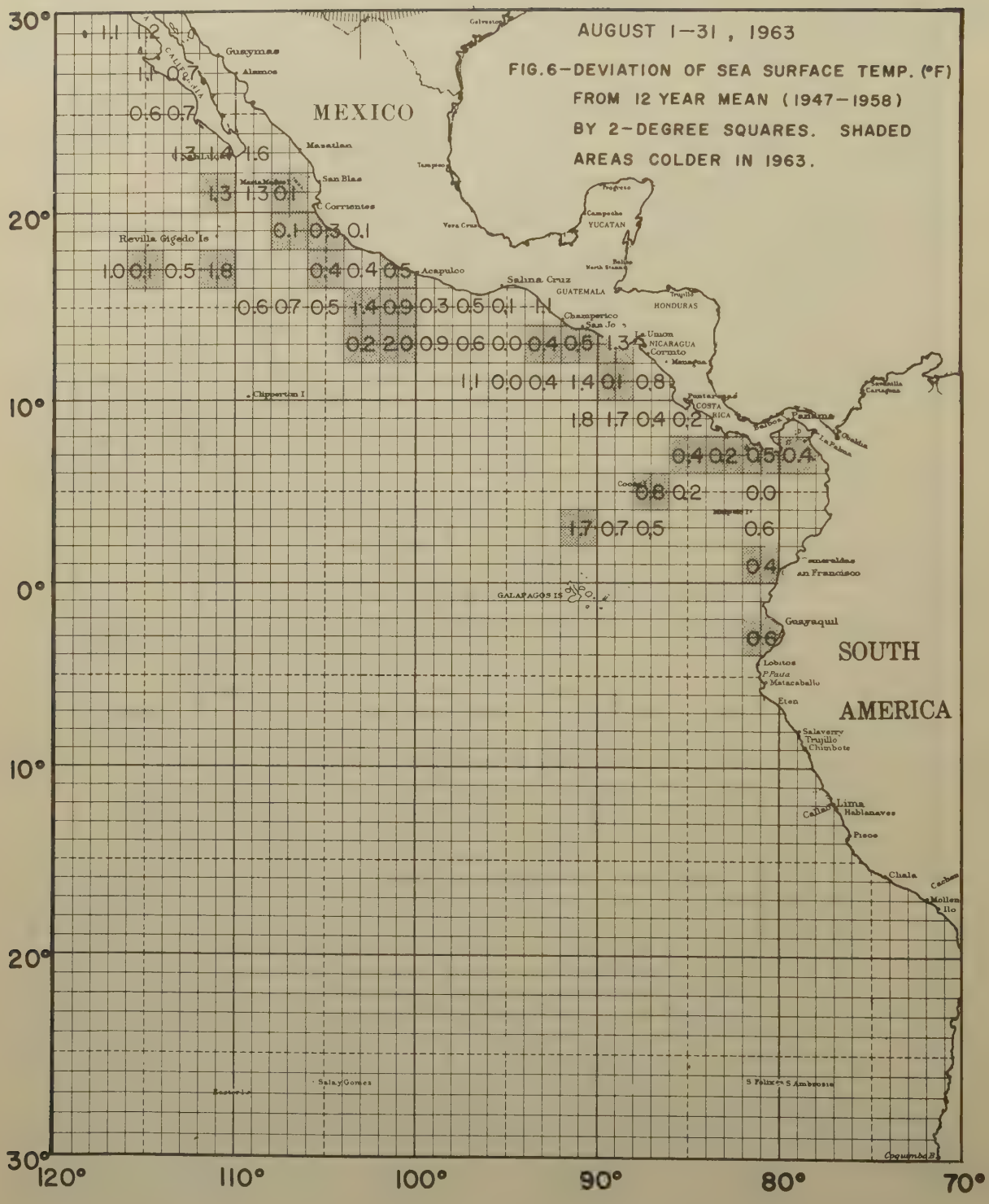

AUGUST 1-31 , 1963
FIG. 1-MEAN SEA SURFACE TEMPERATURES (°F)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

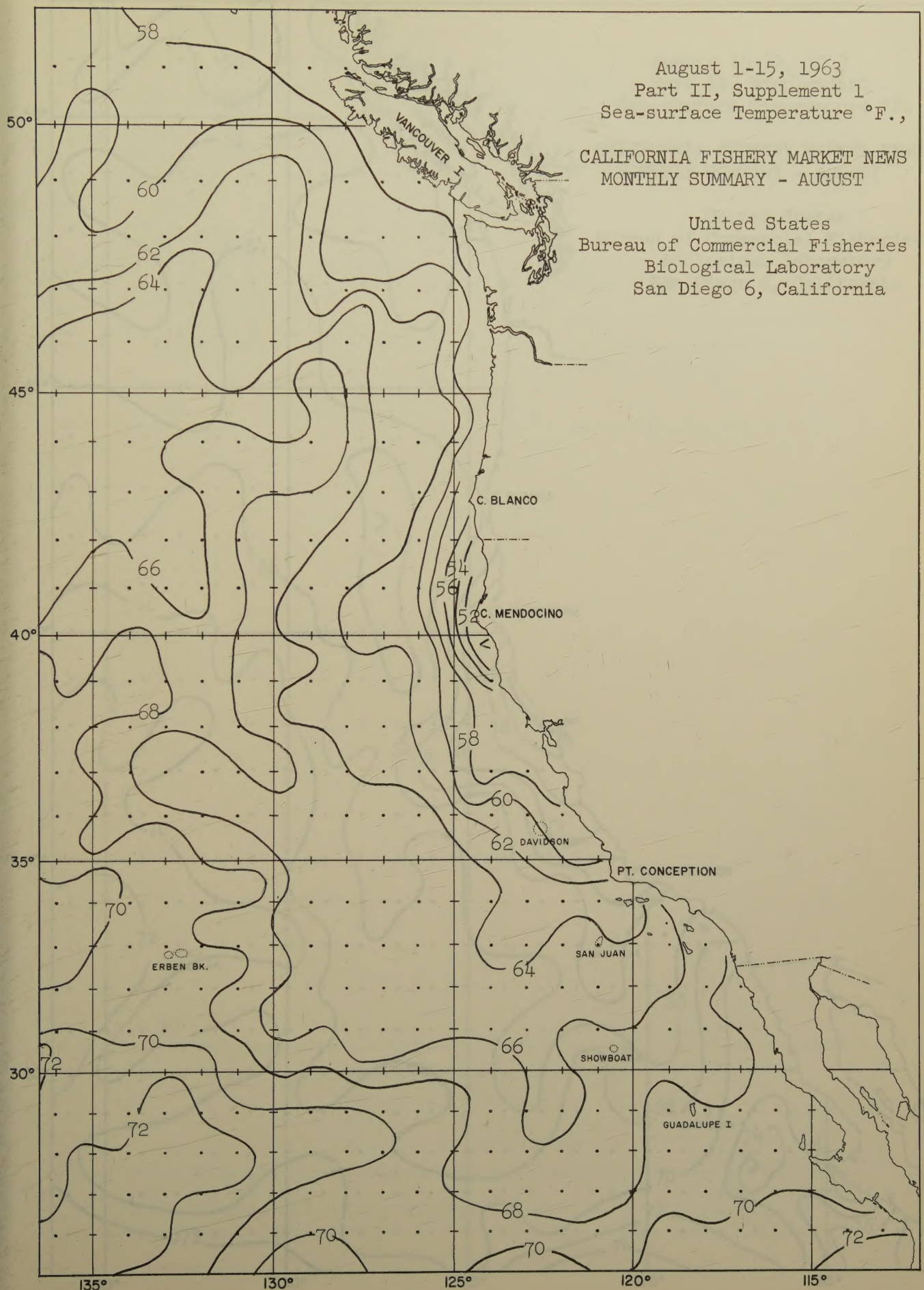

AUGUST 1-31 , 1963
FIG.2-DEVIATION OF SEA SURFACE TEMP. (°F) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1963.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

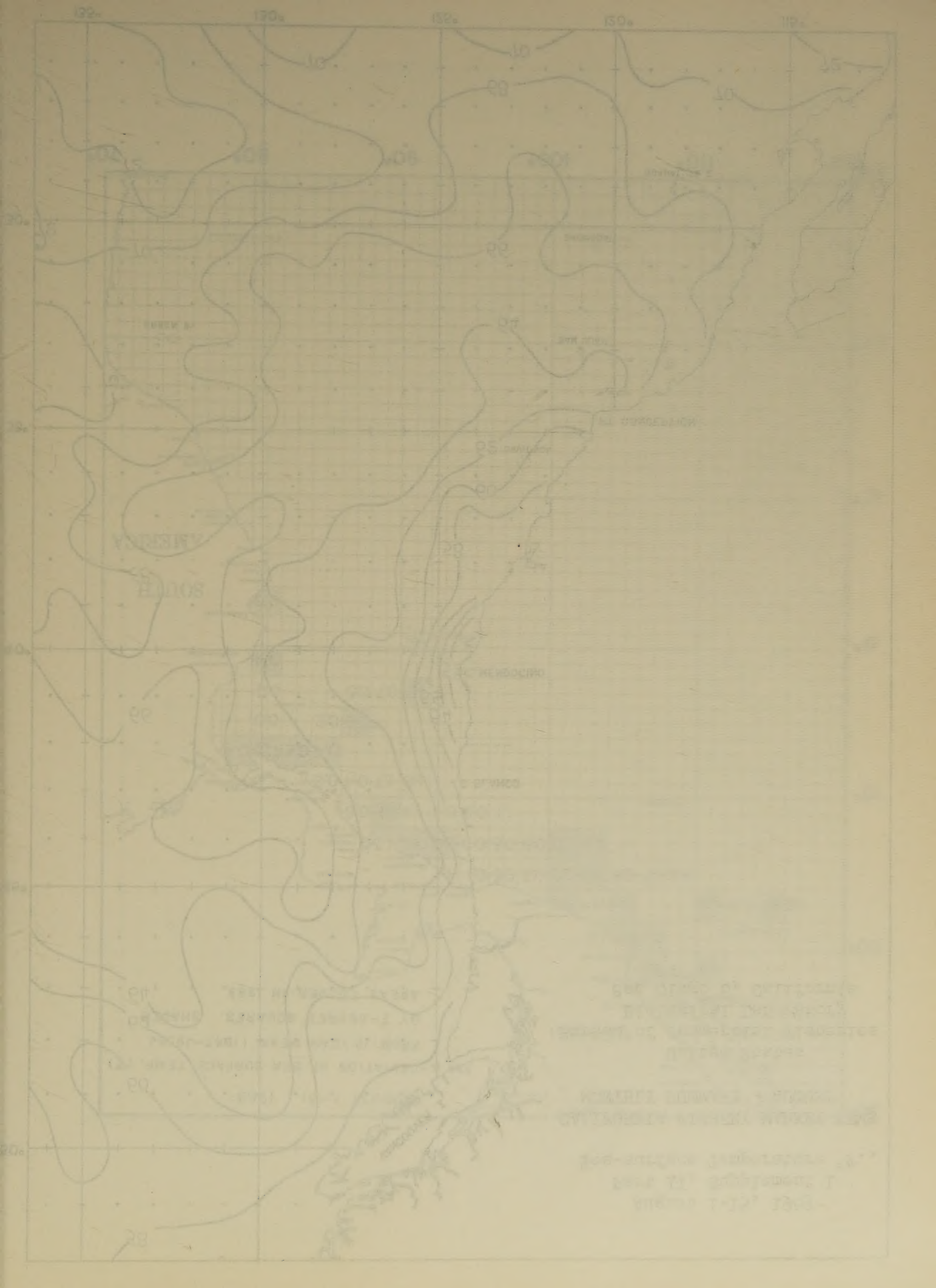

AUGUST 1-31 , 1963
FIG.3-DEVIATION OF SEA SURFACE TEMP. (°F)
FROM AUGUST 1962. HATCHED
AREAS COLDER IN 1963.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


AUGUST 1-31, 1963
FIG. 4 - SEA SURFACE TEMPERATURES (°F)
BY 1-DEGREE SQUARES.
MEXICO
SOUTH
AMERICA
HAWAIIAN ISLANDS
Midway I.
Honolulu
Johnston I.
Canton I.
PHOENIX ISLANDS
Malden I.
UNION ISLANDS
SAMOA ISLANDS
Apia
TONGA ISLANDS
COOK ISLANDS
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
Makatea
Tahiti
TUBUAI OR AUSTRAL IS.
Easter I.
Salas y Gomez
GALAPAGOS IS.
Guaymas
Mazatlan
San Blas
Manzanillo
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
NICARAGUA
Corinto
Managua
Chinandega
Puntarenas
Esmeraldas
San Francisco
Guayaquil
Talara
Lobitos
Paita
Matarani
Ilo
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Arica
S. Felix
S. Ambrosio
30°
20°
10°
0°
10°
20°
30°
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°


AUGUST 1—31, 1963
FIG. 5 - DEVIATION OF SEA SURFACE TEMP. (°F) FROM AUGUST 1962 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1963.
MEXICO
CALIFORNIA
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
Champerico
San Jose
Union
NICARAGUA
Corinto
COSTA RICA
Panama
GULF OF PANAMA
Coiba I
Chipperton I
GALAPAGOS IS
Guayaquil
SOUTH AMERICA
Lobitos
Talara
Matacabello
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Ilo
Salas y Gomez
S Felix
S Ambrosio
30°
20°
10°
0°
10°
20°
30°
120°
110°
100°
90°
80°
70°


AUGUST 1–31, 1963
FIG. 6–DEVIATION OF SEA SURFACE TEMP. (°F) FROM 12 YEAR MEAN (1947–1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1963.
MEXICO
SOUTH AMERICA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
YUCATAN
GALAPAGOS IS
Guaymas
Mazatlan
San Blas
Acapulco
Salina Cruz
Champerico
Panama
Guayaquil
Lobitos
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Clipperton I
Revilla Gigedo Is
Sala y Gomez
S Felix
S Ambrosio
30°
20°
10°
0°
10°
20°
30°
120°
110°
100°
90°
80°
70°


August 1-15, 1963
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - AUGUST
United States
Bureau of Commercial Fisheries
Biological Laboratory
San Diego 6, California
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
ERBEN BK.
SAN JUAN
SHOWBOAT
GUADALUPE I
58
60
62
64
66
68
70
72
50°
45°
40°
35°
30°
135°
130°
125°
120°
115°



August 16-30, 1952
Part II, Supplement 2
Sea-surface Temperature °F.,

CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - AUGUST

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